

# SCIENCE NEWS<sup>®</sup>

The Weekly Newsmagazine of Science

Science Service Publication  
Volume 149, No. 7, February 17, 1996

**Alfred Scott McLaren** Publisher  
**Julie Ann Miller** Editor  
**Blair Burns Potter** Managing Editor  
**Dan Skripkar** Production/Design Director  
**David Lindley** Associate Editor  
**Janet Raloff** Senior Editor  
Environment/Policy  
**Ron Cowen** Astronomy  
**Bruce Bower** Behavioral Sciences  
**Richard Lipkin** Chemistry/  
Materials Science  
**Richard Monastersky** Earth Science  
**John Travis** Biology  
**Kathleen Fackelmann** Biomedicine  
**Tina Adler** Life Sciences  
**Ivars Peterson** Mathematics/Physics  
**Damaris Christensen** Editorial Assistant  
**Cait Anthony** Books/Resource Manager  
**Donald R. Harless** Advertising/Business  
Manager

SCIENCE NEWS (ISSN 0036-8423) is published weekly on Saturday, except the last week in December, for \$49.50 for 1 year or \$88.00 for 2 years (foreign postage \$6.00 additional per year) by Science Service, Inc., 1719 N Street, N.W., Washington, D.C. 20036. Second-class postage paid at Washington, D.C., and additional mailing office. **POSTMASTER:** Send address changes to SCIENCE NEWS, P.O. Box 1925, Marion, Ohio 43305. Change of address: Four to six weeks' notice is required — old and new addresses, including zip codes, must be provided. Copyright © 1996 by Science Service, Inc. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A. on recycled paper. ♻️  
Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

**Editorial and Business Offices:**  
1719 N St. N.W., Washington, D.C. 20036  
202-785-2255; [scinews@scisvc.org](mailto:scinews@scisvc.org)

**Advertising Representative:**  
Lewis Edge & Associates, Inc.  
366 Wall St., Princeton, N.J. 08540  
609-683-7900

**Subscription Department:**  
P.O. Box 1925, Marion, Ohio 43305  
For new subscriptions only, call 1-800-247-2160.  
For customer service, call 1-800-347-6969.

## This Week

- 100 Smart Molecules May Enhance Images
- 100 DNA vaccine set to tackle HIV infection
- 101 Biological stopwatch found in the brain
- 101 The first shark: To bite or not to bite?
- 102 A hint of particles within quarks
- 102 Need soldier ants? Just tell the nursemaid
- 103 Brains hammer home categorical knowledge
- 103 New comet may delight in late March

## Research Notes

- 108 Earth Science
- 108 Nutrition

## Articles

- 104 Let the Games Begin
- 110 The Song in the Stone

Cover: This marble sculpture represents a mathematical form known as the Costa minimal surface. The creation of this artwork by sculptor and mathematician Helaman Ferguson required the application of a new technology to shape the material and the development of new mathematical equations to describe the form. (Photo: Jon Ferguson)



## Departments

- 99 Letters
- 107 Books

Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921. It gratefully accepts tax-deductible contributions and bequests to assist its efforts to increase the public understanding of science, with special emphasis on young people. More recently, it has included in its mission increasing scientific literacy among members of underrepresented groups. Through its Youth Programs it administers the International Science and Engineering Fair, the Science Talent Search for the Westinghouse Science Scholarships, and publishes and distributes the *Directory of Student Science Training Programs for Precollege Students*.

**Board of Trustees** — *Chairman*, Dudley Herschbach; *Vice Chairman*, Gerald F. Tape; *Secretary*, David A. Goslin; *Treasurer*, Willis Harlow Shapley; Joseph W. Berg Jr.; Robert W. Fri; J. David Hann; Shirley M. Malcom; C. Bradley Moore, Elena O. Nightingale; Ben Patrusky; Peter H. Raven; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe. *Honorary Trustees* — *Chairman Emeritus*, Glenn T. Seaborg; Edward Bliss Jr.; Bowen C. Dees; O.W. Riegel; John Troan.

President: Alfred Scott McLaren; Vice President and Business Manager: Donald R. Harless.

## Letters

### Point of clarification on ADHD

In "Imaging hyperactive brains" (SN: 11/25/95, p. 360), the following appears: "Castellanos. . . used. . . MRI to compare the brains of 55 healthy boys and 57 with ADHD." I question the use of "healthy"; "typical" is more accurate and less pejorative.

Bert Carvalho  
Proctor Academy  
Andover, N.H.

### How is a fish like a person?

In "Fishy Sex" (SN: 10/21/95, p. 266), it says that "marine scientists say fish and people actually have enough in common to make the study of fish worthwhile." What are these "in common" things?

Evelyn Coffenberry  
Woodbridge, Va.

*Fish and people have important similarities in their neuroendocrine systems. Also, the*

*areas of the brain and the hormones that appear to differ in homosexual and heterosexual men are similar to the hormones and brain areas Grober and others are studying in fish. Indeed, "there appears to be an evolutionarily conserved mechanism for generating sexual 'flexibility' in all vertebrates," Grober asserts.*

—T. Adler

### Taken to task over nitrate

I was appalled at the response to the letter from Rob Walty (SN: 11/4/95, p. 291). You should have responded that a cation exchange resin will not remove nitrate (NO<sub>3</sub><sup>-</sup>, an anion). You could also have pointed out that the replacement of one calcium or magnesium ion with two sodium ions in a brine-charged water softener is not necessarily a good exchange, especially in terms of health or environmental responsibility.

Just how am I, an employee of a municipal water supply utility, to respond when a customer tells me: "All you need to take care of

the nitrate in the water is a water softener. I read it in SCIENCE NEWS?"

Steven Lueck  
Tucson, Ariz.

### Eruption error site cited

There appears to be an error in "Small-scale survivors of big blasts" (SN: 12/2/95, p. 378). Arenal volcano is in Costa Rica, not Puerto Rico.

John and Anita Thurmond  
Little Rock, Ark.

### Natural selection and the group

I believe that "Return of the Group" (SN: 11/18/95, p. 328) seriously misreports the current state of evolutionary theory by implying that individual selection is the leading theory, with group selection making a comeback.

In fact, both notions are thoroughly discredited. Natural selection operates only on nearly perfect replicators, and neither indi-

*Letters continued on p. 106*